

What is claimed is:

Sub a: 1. An image display device, comprising:  
a liquid crystal panel for displaying an RGB image;  
a light source for supplying light that the liquid crystal panel needs for  
5 display operation thereof; and  
an optical sensor for measuring how the liquid crystal panel is emitting R, G,  
and B light,  
wherein lighting of the light source is controlled according to a measurement  
value obtained from the optical sensor in order to correct brightness or  
chromaticity or both of the liquid crystal panel.

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2. An image display device as claimed in claim 1,  
wherein a viewing angle of the optical sensor is limited and a measurement  
area of the optical sensor depends on the viewing angle.

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3. An image display device as claimed in claim 2,  
wherein the measurement area of the optical sensor is within 10 degrees  
upward, downward, leftward, and rightward of a line perpendicular to the liquid  
crystal panel.

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4. An image display device as claimed in claim 1,  
wherein the optical sensor has a light-sensing area at least equal to areas of  
one R, one G, and one B dots added together.

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5. An image display device as claimed in claim 1,  
wherein the brightness or chromaticity of the liquid crystal panel is  
corrected by controlling a driving voltage or driving current of the light source.

5 6. An image display device as claimed in claim 1,  
wherein the light source is a backlight provided on the back of the liquid  
crystal panel.

7. An image display device as claimed in claim 1,  
wherein the RGB image is displayed by receiving image data transmitted  
from a transmitting side.

8. An image display device as claimed in claim 1, further comprising:  
a temperature sensor for measuring surface temperature of the light source,  
wherein the driving voltage or driving current of the light source is  
controlled in such a way that the surface temperature of the light source is kept  
constant.

9. An image display device as claimed in claim 8,  
wherein the temperature sensor is a thermistor whose resistance varies with  
the surface temperature of the light source.

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10. An image display device comprising:  
a liquid crystal panel for displaying an RGB image;

a backlight for illuminating the liquid crystal panel from behind;

an optical sensor for measuring how the liquid crystal panel is emitting R, G, and B light;

a signal reading circuit for converting a measurement value obtained from  
5 the optical sensor into a current brightness value of the liquid crystal panel;

brightness setting means for permitting entry of specified brightness of the liquid crystal panel;

converting means for converting an output of the brightness setting means into a specified brightness value of the liquid crystal panel;

a calculator for calculating a difference between the current brightness value and the specified brightness value of the liquid crystal panel;

a duty factor setting circuit for outputting a pulse signal whose duty factor depends on an output of the calculator; and

an inverter for producing a driving voltage and a driving current for the backlight according to the pulse signal.

wherein the brightness of the liquid crystal panel is corrected by controlling lighting of the backlight according to the measurement value obtained from the optical sensor.

11. An image display device as claimed in claim 10, further comprising:  
optical sensors for measuring how the liquid crystal panel is emitting R, G,  
and B light independently for the R, G, and B light;

a signal reading circuit for converting measurement values obtained from the optical sensors into a current brightness value and a current chromaticity value of

the liquid crystal panel;

a thermistor whose resistance varies with surface temperature of the backlight;

a temperature reading circuit for converting the resistance of the thermistor  
5 into a surface temperature value of the backlight; and

converting means for converting an output of the temperature reading circuit  
into a specified brightness value of the liquid crystal panel,

wherein brightness and chromaticity of the liquid crystal panel are corrected  
by controlling lighting of the backlight according to the measurement values  
10 obtained from the optical sensors in such a way that the surface temperature of the  
backlight is kept constant.

12. An image processing device comprising:

varying means for varying how R, G, and B light is emitted to display an  
15 image on a display panel; and

a sensor for measuring how the R, G, and B light is emitted to display the  
image,

wherein brightness or chromaticity or both of the image is corrected by  
controlling the varying means according to a measurement value obtained from the  
20 sensor.

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